

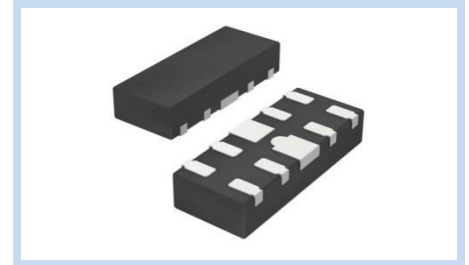
# ESD Suppressor 3.3V 4-Unidirectional DFN2510

ME3V34U1V8D2510

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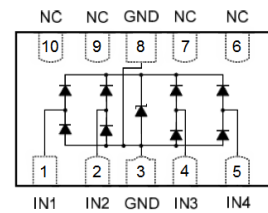
## FEATURE

- IEC 61000-4-2 ESD:  $\pm 15\text{KV}$  (Air)  $\pm 8\text{KV}$  (Contact)
- ESD Protection for four Unidirectional Channels
- Low Capacitance
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology



## APPLICATION

- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- USB 2.0 Interface
- 10/100/1000M Ethernet Port
- Display Port Interface



## MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage per IEC61000-4-2 (Contact discharge)	$V_{ESD}$	$\pm 8$	KV
ESD Voltage per IEC61000-4-2 (Air discharge)		$\pm 15$	KV
Peak Pulse Current ( $t_p=8/20\mu s$ )	$I_{PP}$	5	A
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PP}$	150	W
Operating Junction Temperature (10 Seconds)	$T_L$	260	$^{\circ}\text{C}$
Operating Temperature Range	$T_J$	$-55\sim+125$	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	$-55\sim+150$	$^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	$V_{RWM}$	--	--	3.3	V
Forward Voltage	$I_F=10\text{mA}$	$V_F$	--	--	1.3	V
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$	$V_{BR}$	5.6	6.4	7.0	V
Reverse Leakage Current	$V_R=5\text{V}$	$I_R$	--	0.5	1.0	$\mu\text{A}$
Forward Clamping Voltage	$I_{PP}=1\text{A}$ , $t_p=8/20\mu s$	$V_C$	--	1.8	--	V
Reverse Clamping Voltage	$I_{PP}=1\text{A}$ , $t_p=8/20\mu s$	$V_C$	--	6.2	10	V
Off State Junction Capacitance	$V_{dc}=0$ , $f=1\text{MHz}$ Any I/O pin to GND	$C_J$	--	0.50	0.60	pF
Off State Junction Capacitance	$V_{dc}=0$ , $f=1\text{MHz}$ Between I/O pins	$C_J$	--	0.25	0.30	pF

Notes:

1.  $T_J=25^{\circ}\text{C}$  unless otherwise specified

# ESD Suppressor

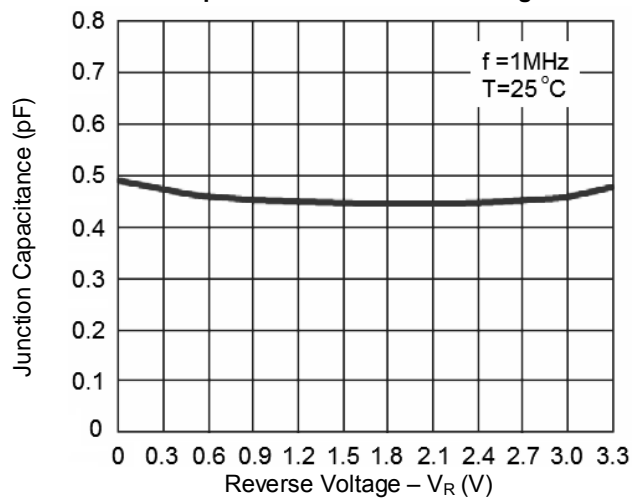
## 3.3V 4-Unidirectional DFN2510

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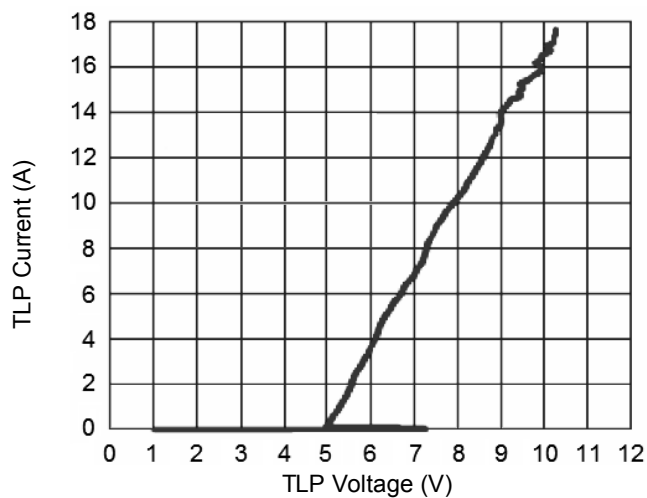
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### CHARACTERISTIC CURVES

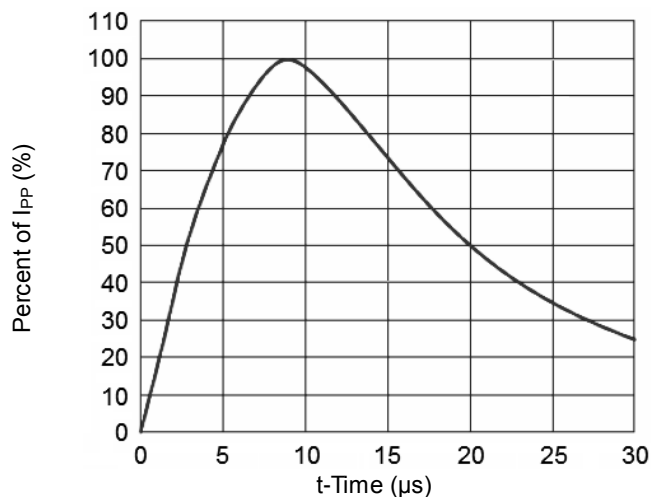
Capacitance vs. Reverse Voltage



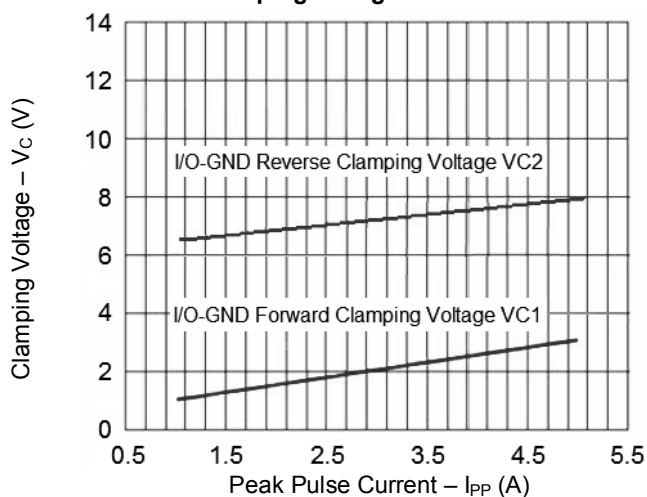
TLP Measurement



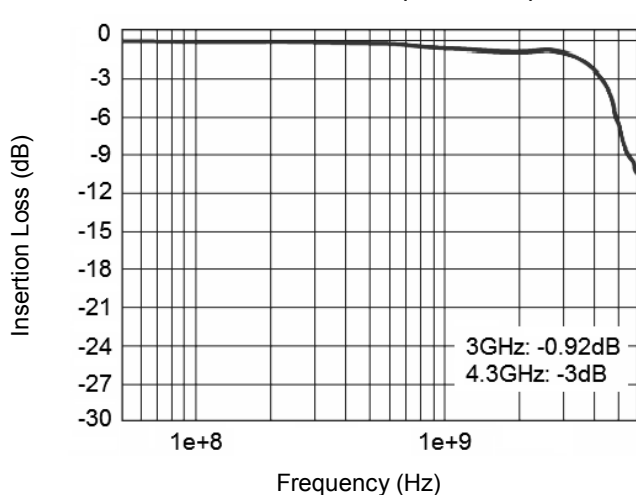
Pulse Waveform



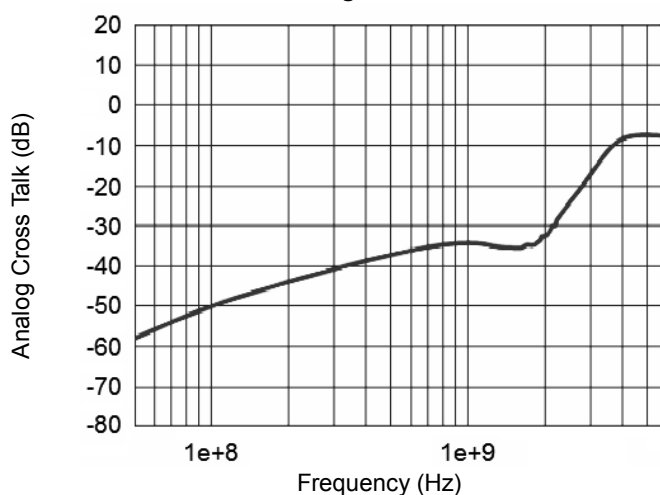
I/O-GND Clamping Voltage vs. Peak Pulse Current



Insertion Loss S21 (I/O to GND)



Analog Cross Talk



# ESD Suppressor

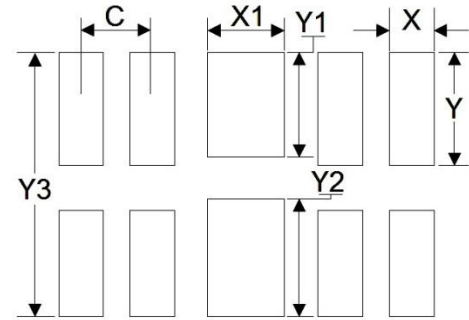
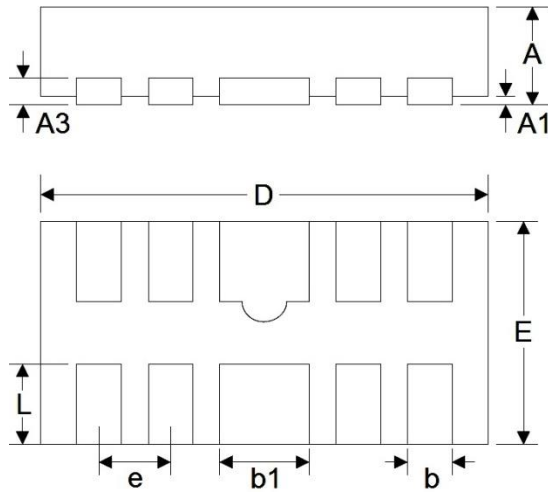
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### DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.45	0.55
A1	0.00	0.05
A3	0.15	0.15
b	0.15	0.25
b1	0.30	0.50
D	2.40	2.60
e	0.50	0.50
E	0.90	1.10
L	0.30	0.46
C	0.50	0.50
X	0.25	0.25
X1	0.45	0.45
Y	0.63	0.63
Y1	0.58	0.58
Y2	0.70	0.70
Y3	1.40	1.40



\*Specifications subject to change without notice.